

초 음 파 탐 상 검 사 보 고 서

ULTRASONIC TESTING REPORT

 주식회사 금 가 Kumga Co., Ltd.		보고서 번호 Report No.		KG - KISI - U003	
		보고서 일자 Report Date		2018년 04월 09일	
본 사 : 서울특별시 서대문구 연희로 18, 금가빌딩 3층 전 화 : TEL : (02) 796 - 3838 FAX : (02) 796 - 3858 서 울 : 서울 구로구 구로중앙로 198, 구로기계공구상가 35동304호 전 화 : TEL : (02) 2634 - 7518 FAX : (02) 2634 - 7519		페이지 번호 Report No.		1 of 3	
발주처 Client (주)한국구조물안전연구원			공사명 / 번호 Project Name / No. 천안논산고속도로 정밀안전진단 2구역 강재비파괴 용역		
품명 Item Name 검상천교			규정 / 절차서 Code / Procedure KS B 0896 / 16E081-C01		Rev. No. 0
인식번호 / 부품번호 Heat No. / M/O No. N/A			도면번호 Drawing No. N/A		Rev. No.
적용규격 Applied Spec. KS B 0896 - 2류이상			계약번호 Job / Contract No. N/A		
재질 / Base Material Type SM490B		두께 / 크기 Thickness / Size 12.0 ~ 22.0 mm / inch		표면상태 / Surface condition As welded	
장비 Equipment	제조사 / Maker SONATEST		모델 / Model SITESCAN 130	일련번호 / Serial No. 1301342	Computerized Program ID (Rev.)
탐촉자 Search Unit	제조사 Maker	모델 Model	일련번호 Serial. No	각도 Angle	주파수 Frequency
	TKS	4C8x9A70	ACMC879	70 °	4 MHz
	TKS	4C10N	NEEA338	0 °	4 MHz
검사방법 및 형태 Method & Mode		☐ 수직법 (Straight Beam) ☒ 사각법 (Angle Beam)		☒ 접촉법 (Contact) ☐ 수침법 (Immerse)	
접촉매질 Couplant		☐ 기계유 (Machine Oil) ☒ CMC ☐ 글리세린 (Glycerin)		탐촉자 케이블 Search Unit Cable	Type : LEMO 00, LEMO 1 Length : 2M
교정시험편 Calibration Block		☒ STB A1, A2 ☐ ASME Basic Calibration		일련번호 : A1 No.009115 A2 No.9205 Serial No.	
검출레벨 Detector Level		II ~ III Level			
기준감도 Reference Level		☐ B1 % of Full Screen Height at dB ☒ Response from STB A2 4X4 (NOTCH, SDH, FBH) at 59.0 dB			
탐상감도 Scanning Sensivity Level		59.0~61.0 dB Above the Primary Reference Level		시험일자/Examination Date 2018. 03. 28	
Sketch on line, if necessary. ☒ Attached. 필요 시 실선안에 스케치 하거나 또는 첨부할 것.					
시험자 Examined By : 김 용 철			EXAMINATION AMOUNTS 36		☐ CUSTOMER 주문주 ☐ CLIENT 발주처
승인자 Approved By : 김 용 철					AUTHORIZED(NUCLEAR) INSPECTOR 공인(원자력) 검사원

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보 고 일 자
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2018년 04월 09일

본 사 : 서울특별시 서대문구 연희로 18, 금가빌딩 3층
전 화 : TEL : (02) 796 - 3838 FAX : (02) 796 - 3858
서 울 : 서울 구로구 구로중앙로 198 구로기계공구상가 35동304호
전 화 : TEL : (02) 2634 - 7518 FAX : (02) 2634 - 7519

페이지 번호
Report No.

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검 사 결 과 및 판 정

Results & Interpretation

확인번호 Identification No	모재두께 Material Thickness (mm)	각도 Angle (°)	위치 Location		빔거리 Sound Path (W) (mm)	결함깊이 Depth From Surface (D) (mm)	최대 DAC/dB/영역 Max. DAC/dB/Area	결함길이 Defect Length (L) (mm)	등급 Class	결과 Results		비고 Reamrks
			From "X"	From "Y"						합격 Accept	불합격 Reject	
S1 - 주형1 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형1 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S1 - 주형2 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형2 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S1 - 주형3 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형3 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S1 - 주형4 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형4 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S1 - 주형5 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형5 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S1 - 주형6 - W1	12+16	70	0	2400	결함지시 없음			1	V			
S1 - 주형6 - W2	16+22	70	0	2400	결함지시 없음			1	V			
S2 - 주형1 - W2	16+12	70	0	2400	결함지시 없음			1	V			
S2 - 주형1 - W3	12+16	70	0	2400	결함지시 없음			1	V			
S2 - 주형2 - W1	22+16	70	0	2400	결함지시 없음			1	V			
S2 - 주형2 - W4	16+22	70	0	2400	결함지시 없음			1	V			
S2 - 주형3 - W1	22+16	70	0	2400	결함지시 없음			1	V			
S2 - 주형3 - W3	12+16	70	0	2400	결함지시 없음			1	V			
S2 - 주형4 - W1	22+16	70	0	2400	결함지시 없음			1	V			
S2 - 주형4 - W4	16+22	70	0	2400	결함지시 없음			1	V			

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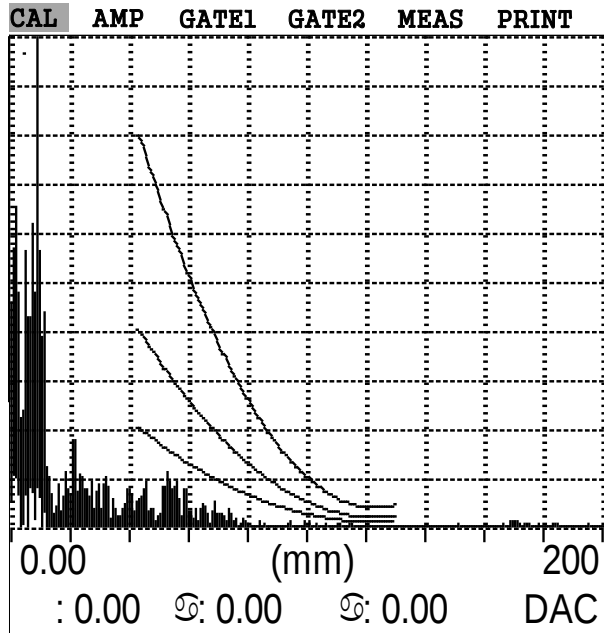
검 사 결 과 및 판 정

Results & Interpretation

확인번호 Identification No	모재 두께 Material Thickness (mm)	각도 Angle (°)	위치 Location		빔거리 Sound Path (W) (mm)	결 함 깊 이 Depth From Surface (D) (mm)	최대 DAC/dB/영역 Max. DAC/dB/Area	결 함 길 이 Defect Length (L) (mm)	등 급 Class	결 과 Results		비 고 Reamrks
			From "X"	From "Y"						합격 Accept	불 합격 Reject	
S2 – 주형5 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S2 – 주형5 – W3	12+16	70	0	2400	결 함 지 시 없 음			1	V			
S2 – 주형6 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S2 – 주형6 – W4	16+22	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형1 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형1 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형2 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형2 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형3 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형3 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형4 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형4 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형5 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형5 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형6 – W1	22+16	70	0	2400	결 함 지 시 없 음			1	V			
S3 – 주형6 – W2	16+12	70	0	2400	결 함 지 시 없 음			1	V			

이 하 여 백

LOCATION : S1 - 주형1 - W1



ZERO ▶▶
8.671

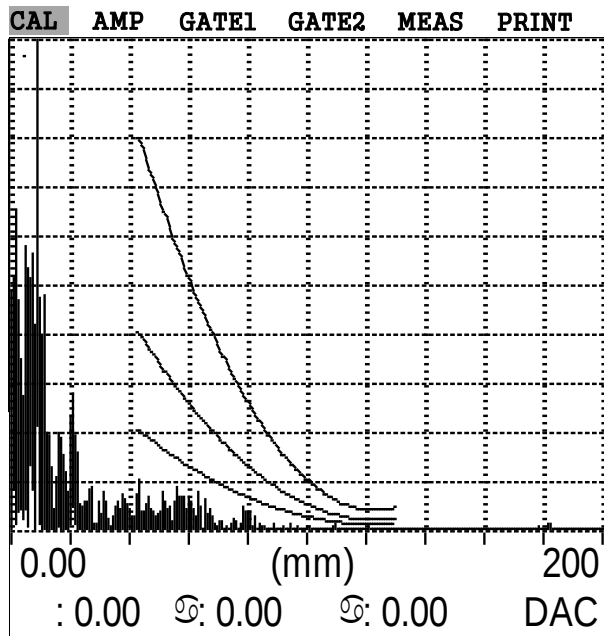
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형1 - W2



ZERO ▶▶
8.671

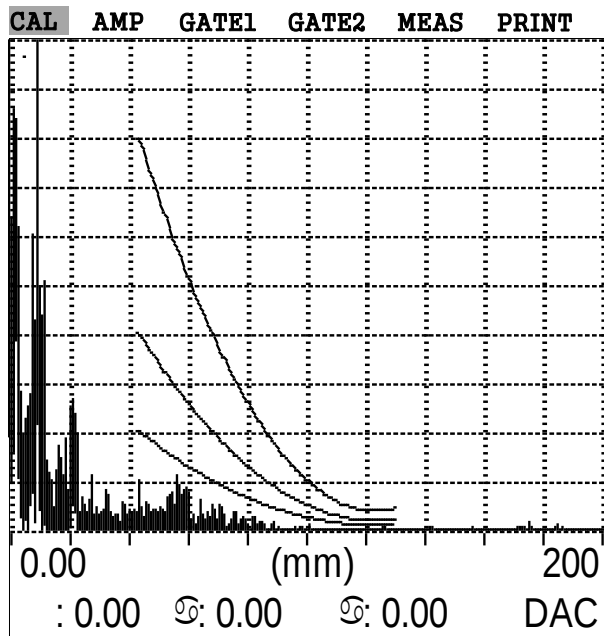
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형2 - W1



ZERO ▶▶
8.671

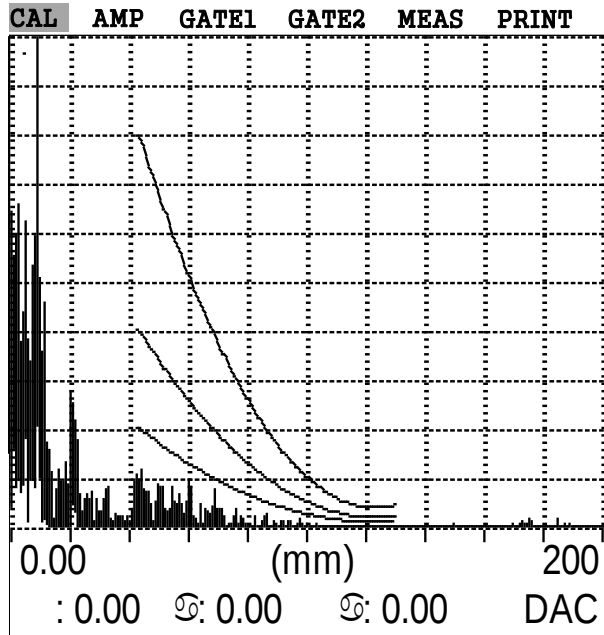
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형2 - W2



ZERO ▶▶
8.671

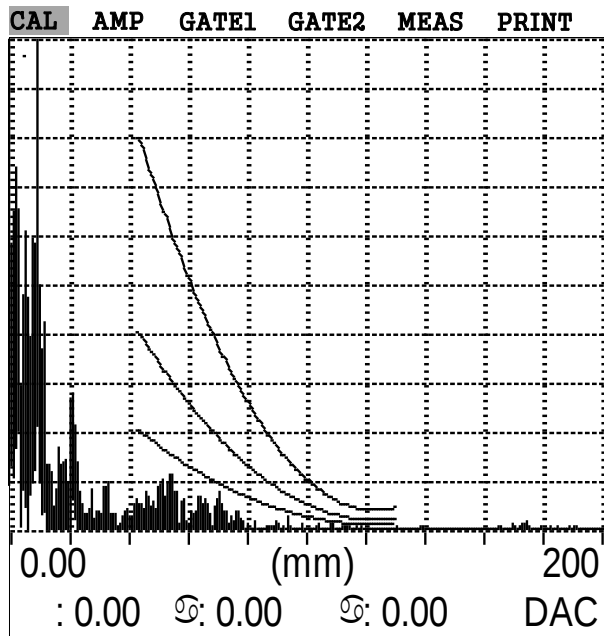
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형3 - W1



ZERO ▶▶
8.671

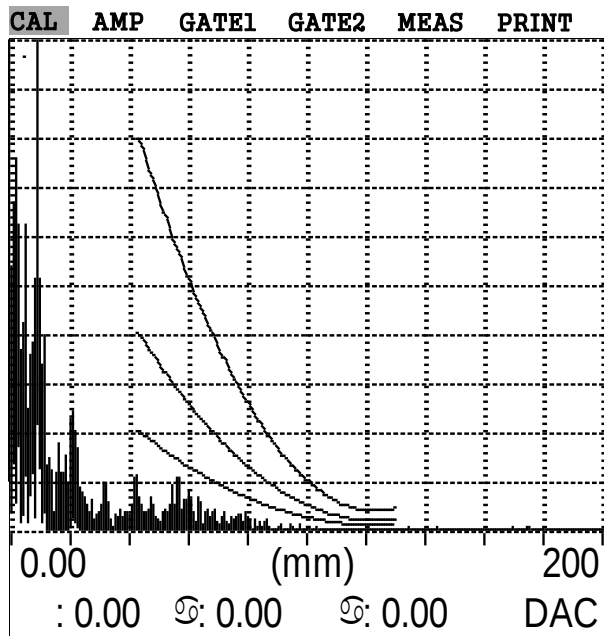
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형3 - W2



ZERO ▶▶
8.671

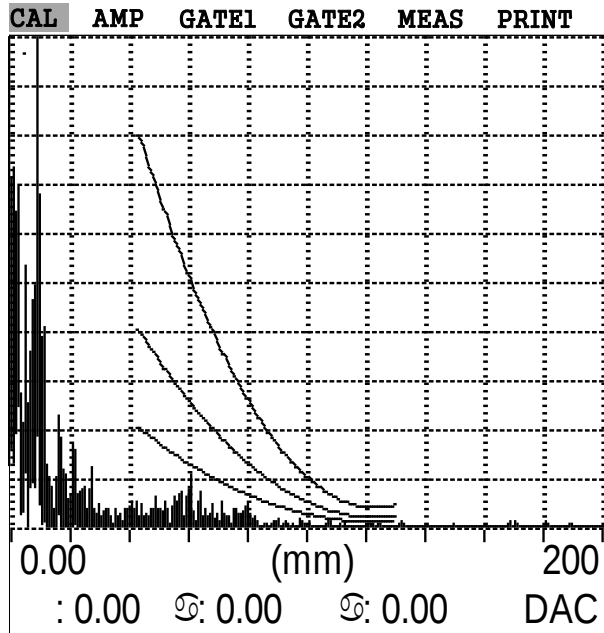
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형4 - W1



ZERO ▶▶
8.671

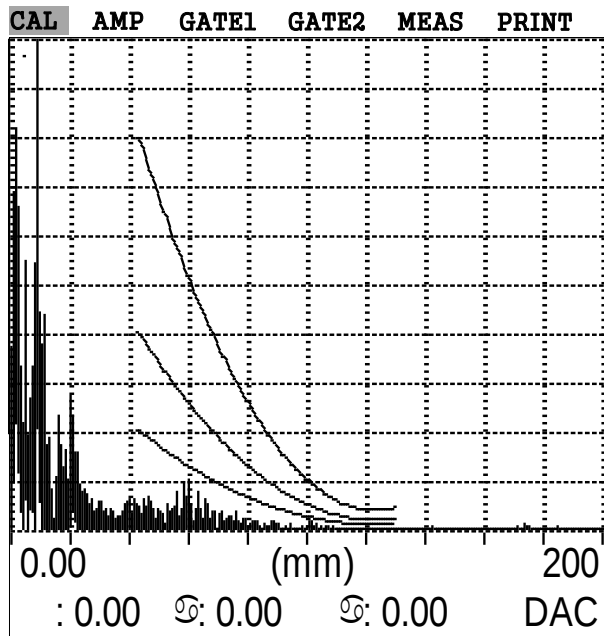
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형4 - W2



ZERO ▶▶
8.671

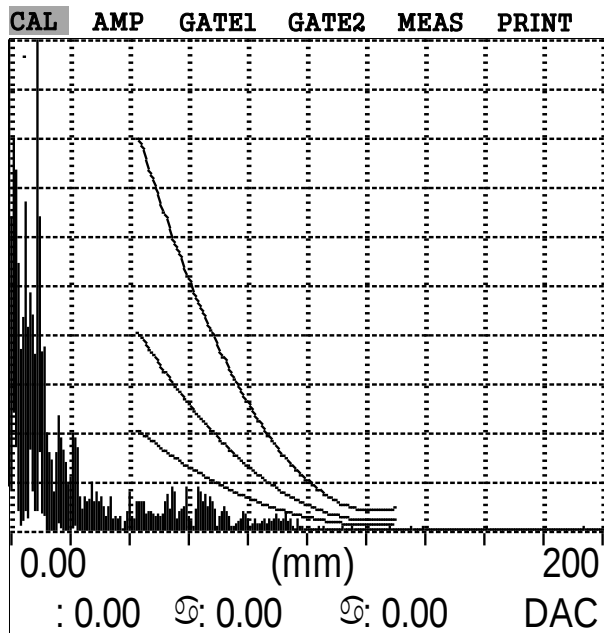
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3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형5 - W1



ZERO ▶▶
8.671

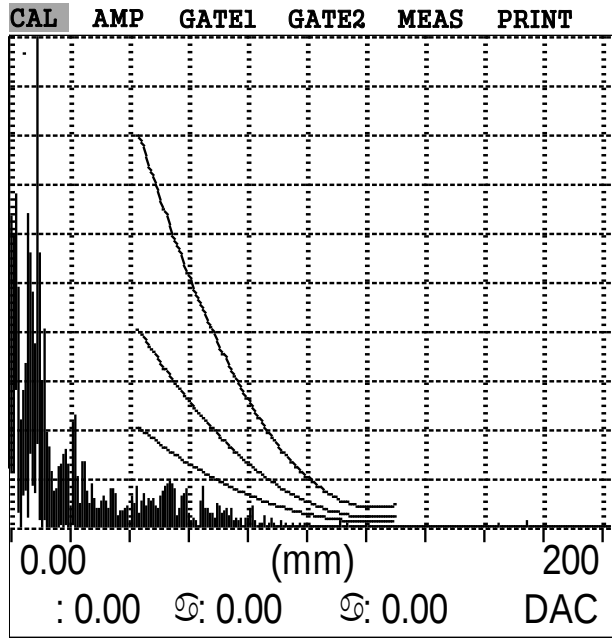
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RANGE ▶▶
200

DELAY ▶▶
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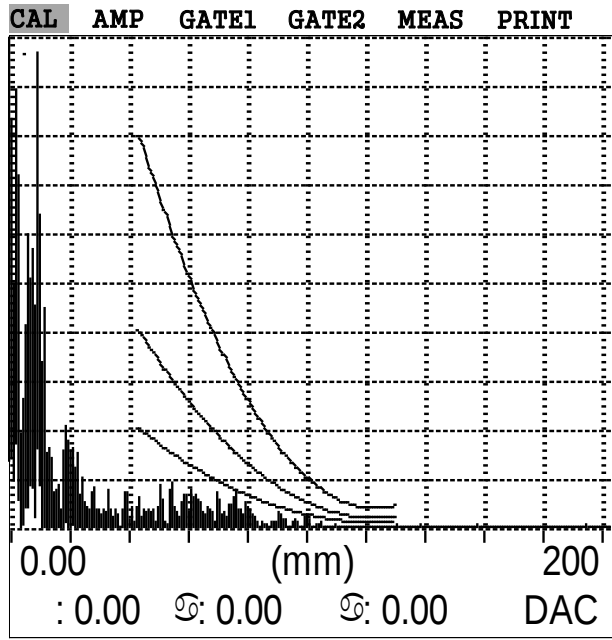
REF 59.0
GAIN 2
61.0
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LOCATION : S1 - 주형5 - W2



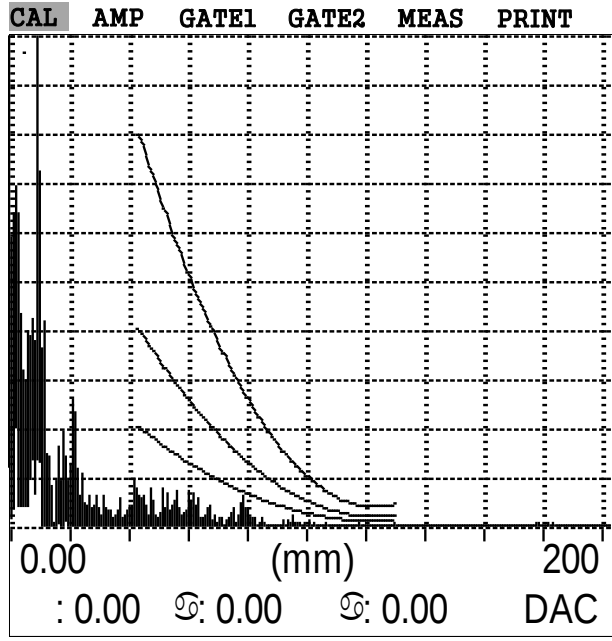
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VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형6 - W1



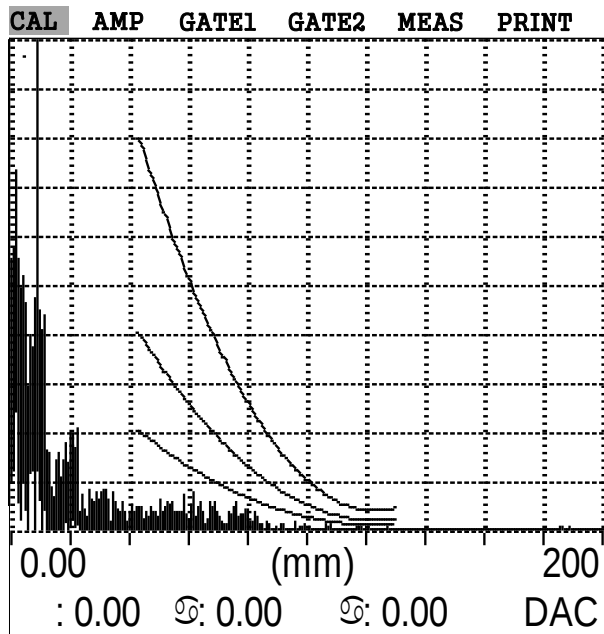
ZERO 8.671
VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S1 - 주형6 - W2



ZERO 8.671
VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형1 - W2



ZERO ▶▶
8.671

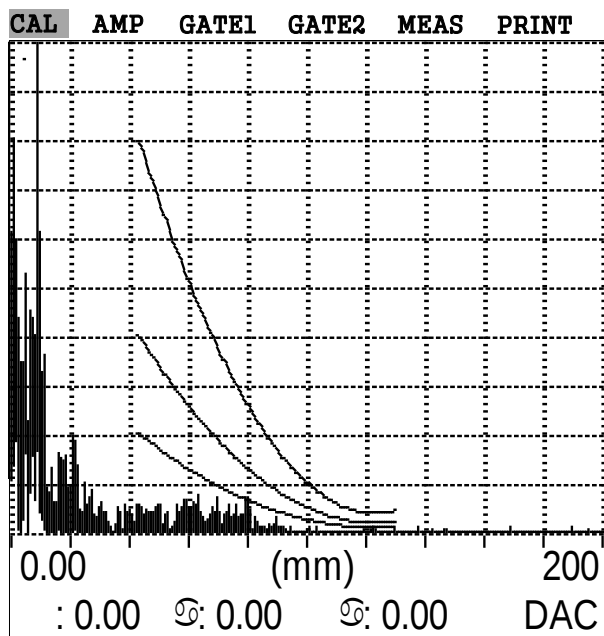
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형1 - W3



ZERO ▶▶
8.671

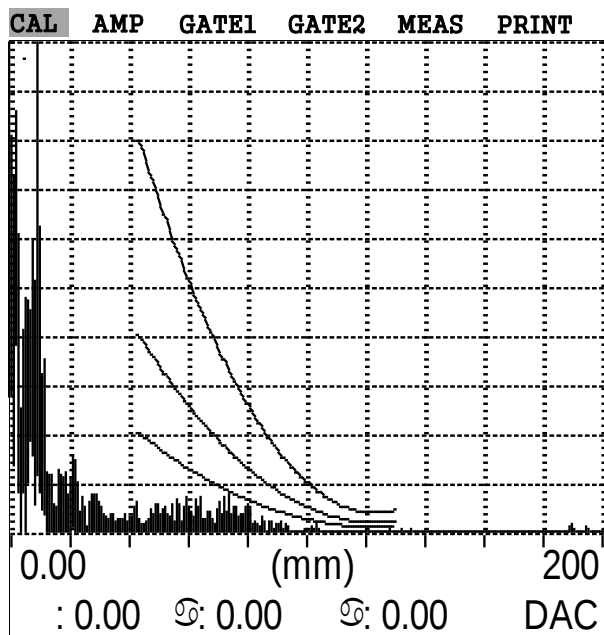
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형2 - W1



ZERO ▶▶
8.671

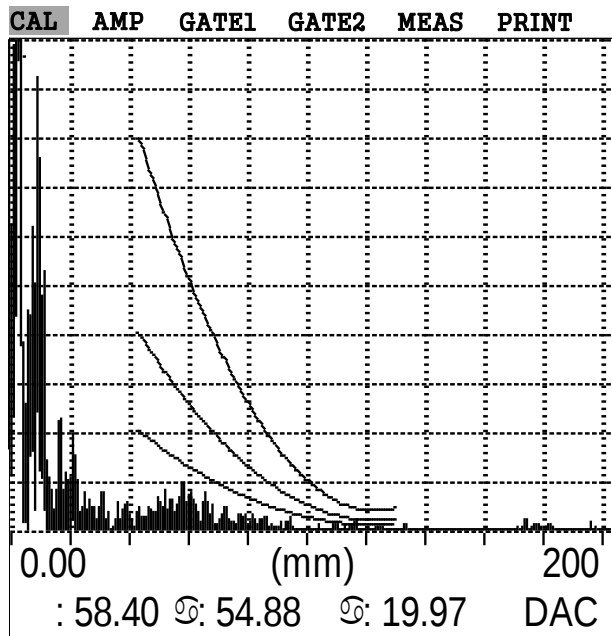
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RANGE ▶▶
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DELAY ▶▶
0.00

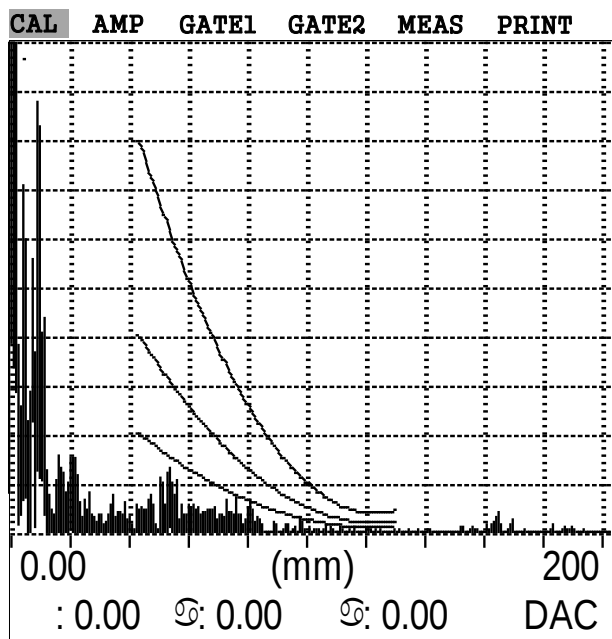
REF 59.0
GAIN 2
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LOCATION : S2 - 주형2 - W4



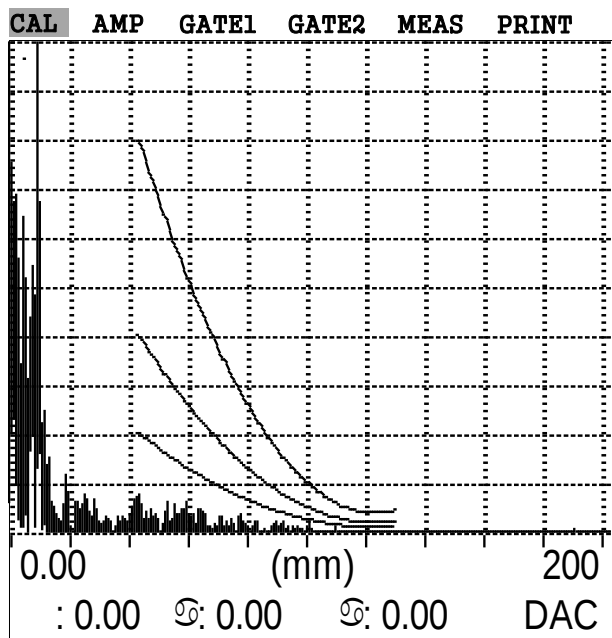
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VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형3 - W1



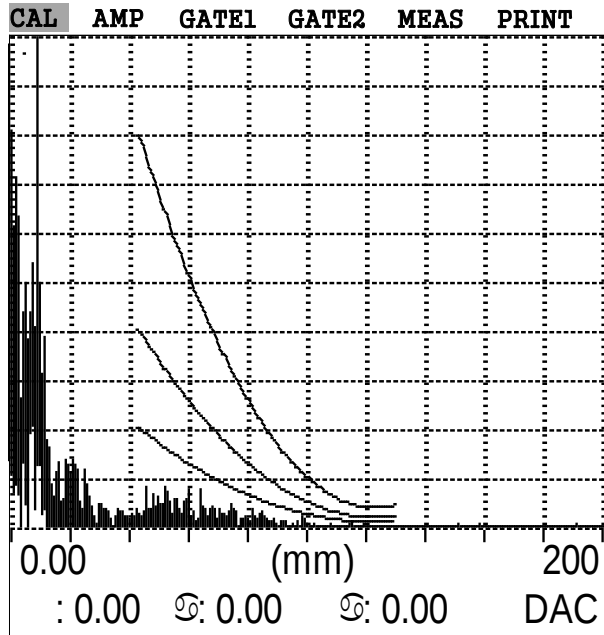
ZERO 8.671
VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형3 - W3



ZERO 8.671
VEL 3221
RANGE 200
DELAY 0.00
REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형4 - W1



ZERO ▶▶
8.671

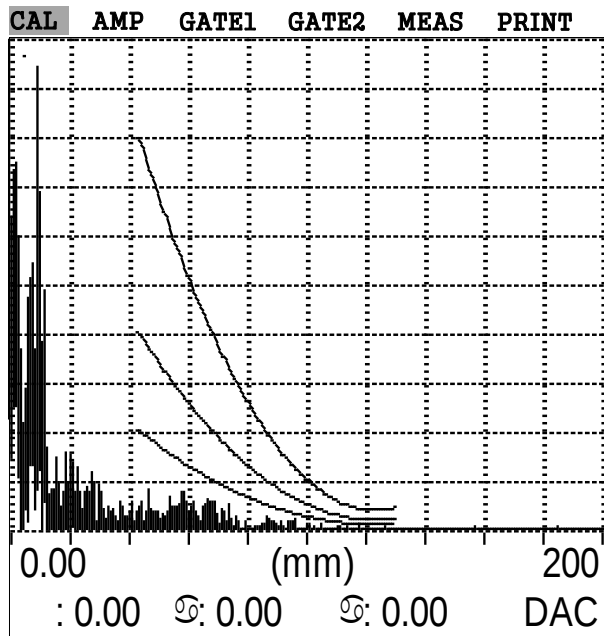
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형4 - W4



ZERO ▶▶
8.671

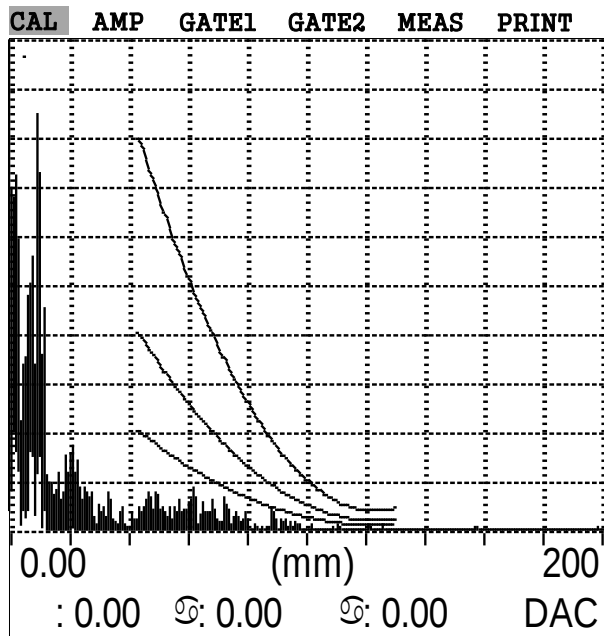
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형5 - W2



ZERO ▶▶
8.671

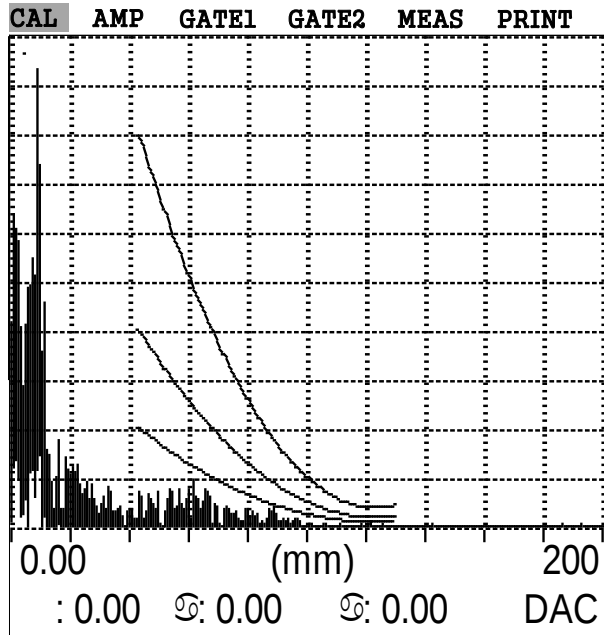
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3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형5 - W3



ZERO ▶▶
8.671

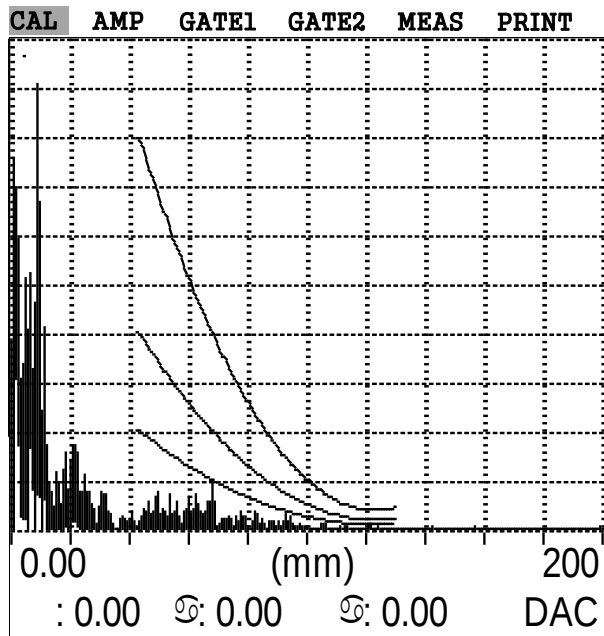
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형6 - W2



ZERO ▶▶
8.671

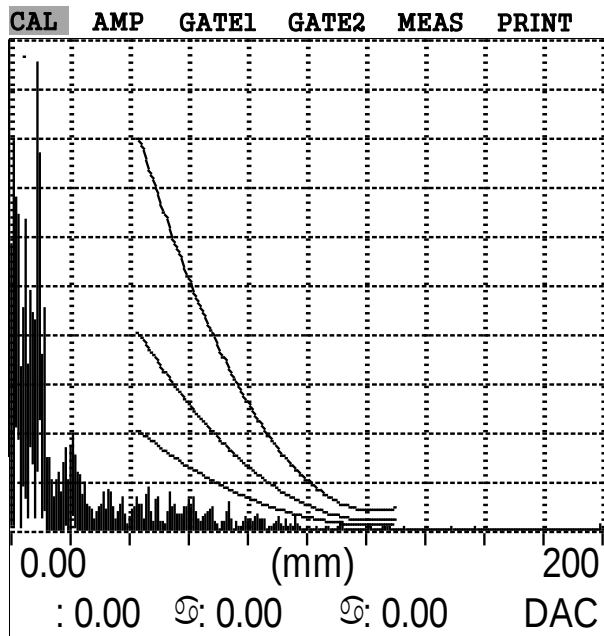
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S2 - 주형6 - W4



ZERO ▶▶
8.671

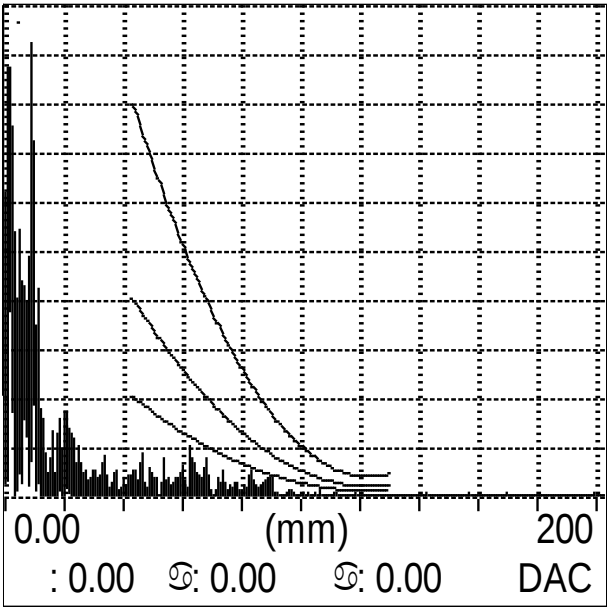
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형1 - W1



ZERO ▶▶
8.671

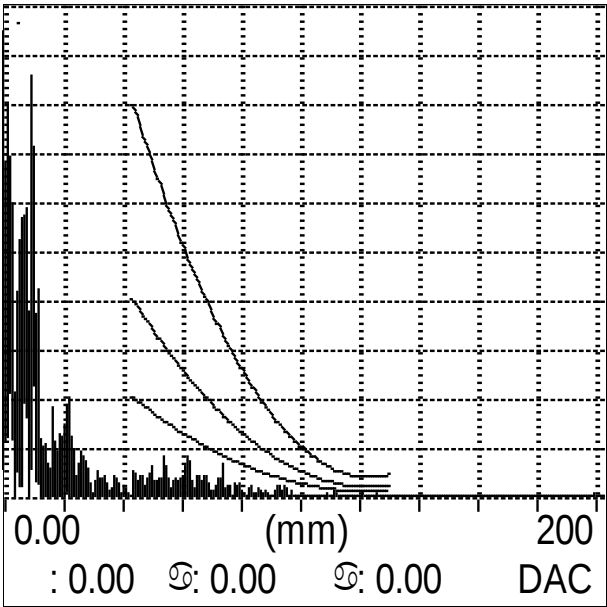
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형1 - W2



ZERO ▶▶
8.671

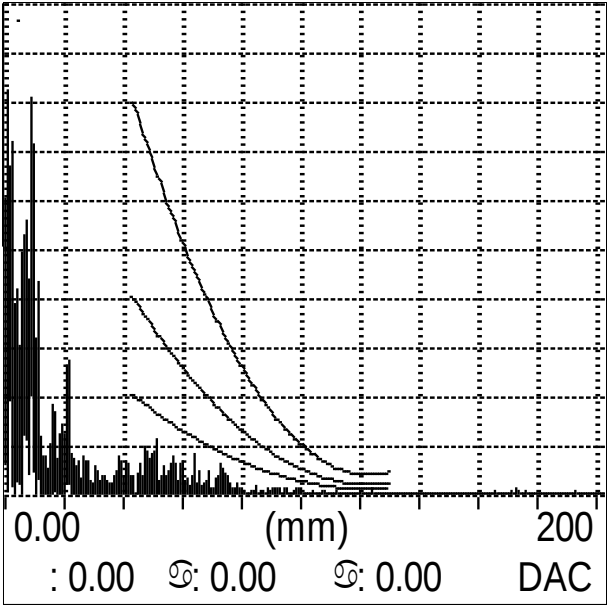
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형2 - W1



ZERO ▶▶
8.671

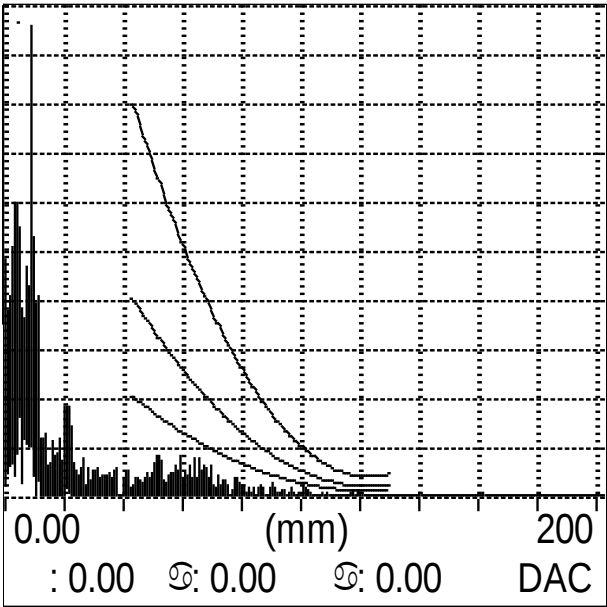
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형2 - W2



ZERO ▶▶
8.671

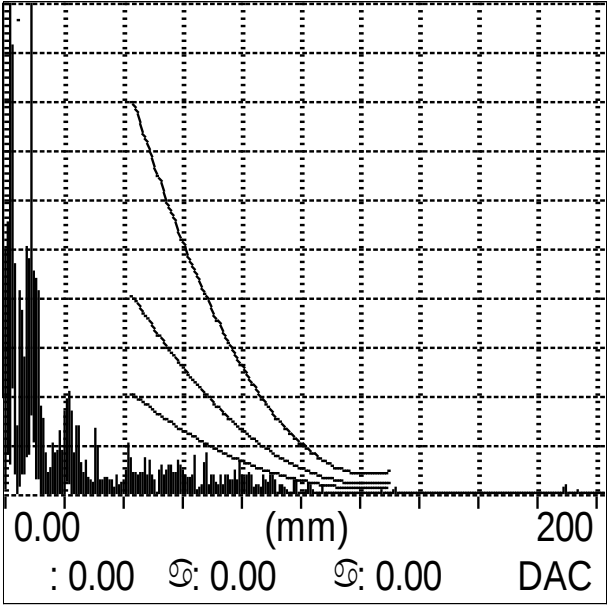
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형3 - W1



ZERO ▶▶
8.671

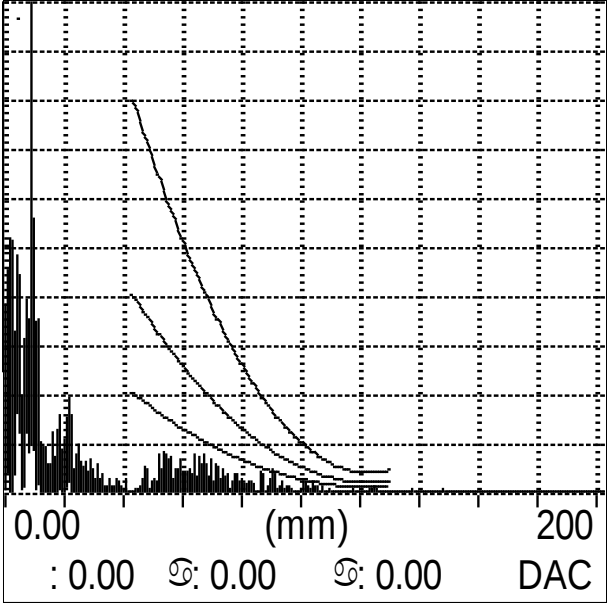
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형3 - W2



ZERO ▶▶
8.671

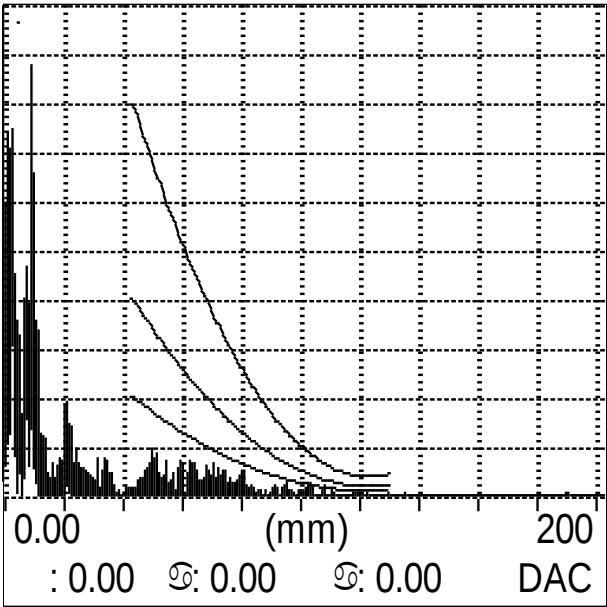
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형4 - W1



ZERO ▶▶
8.671

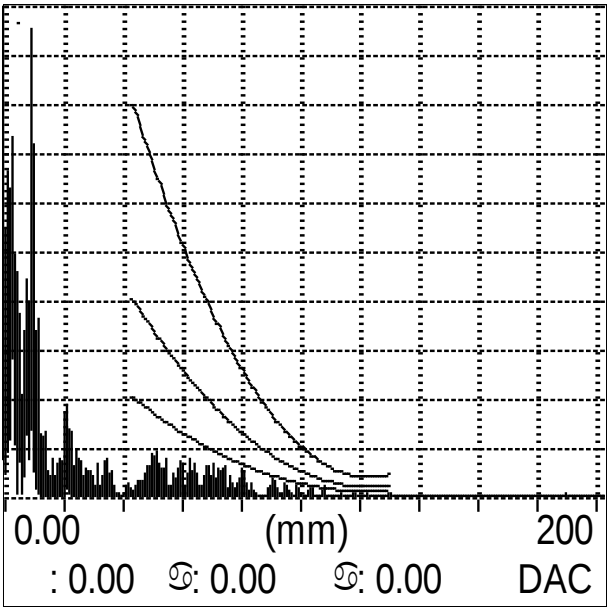
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형4 - W2



ZERO ▶▶
8.671

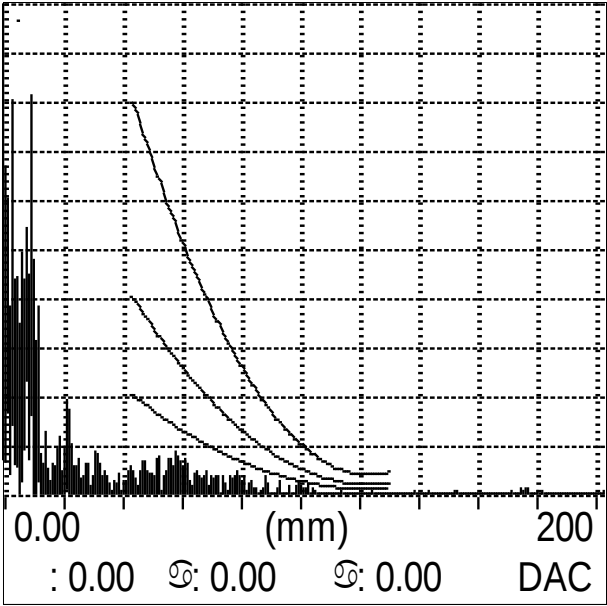
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형5 - W1



ZERO ▶▶
8.671

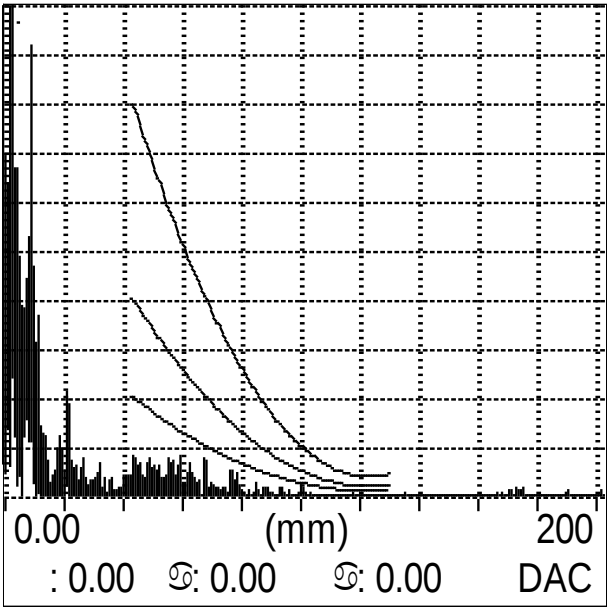
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형5 - W2



ZERO ▶▶
8.671

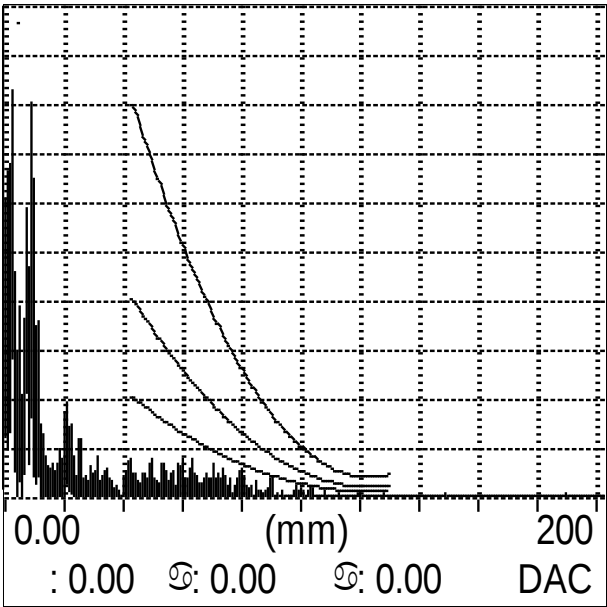
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형6 - W1



ZERO ▶▶
8.671

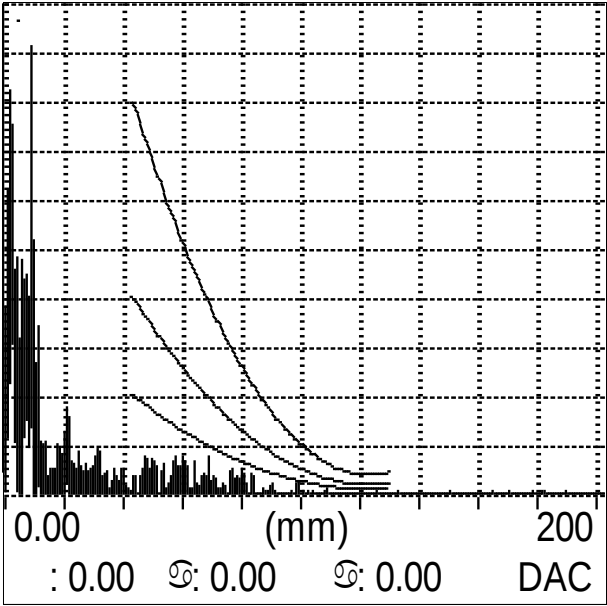
VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE

LOCATION : S3 - 주형6 - W2



ZERO ▶▶
8.671

VEL ▶▶
3221

RANGE ▶▶
200

DELAY ▶▶
0.00

REF 59.0
GAIN 2
61.0
SINGLE